

REMARKS

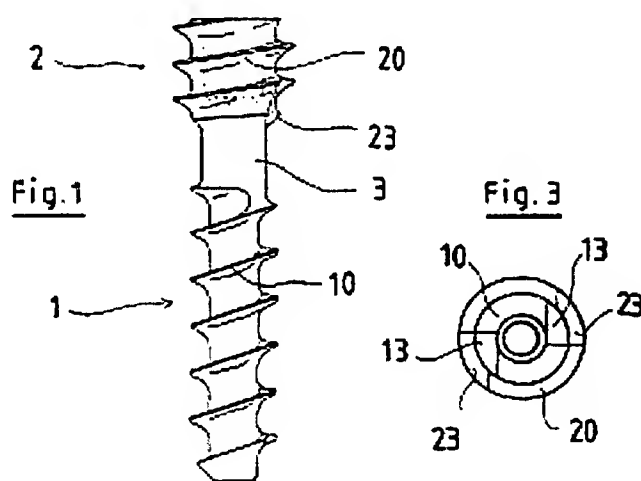
The above-identified application has been reviewed in light of the Final Office Action mailed on March 2, 2010. Claims 21, 23-28, 32-36, 40-44, 48 and 49 are currently pending in the application. Applicants respectfully traverse the rejection of the claims.

In the Office Action, claims 21, 23, 24, 27, 32-36 and 40-49 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,001,101 to Augagneur et al. (hereinafter "Augagneur") in view of U.S. Patent No. 5,536,127 to Pennig (hereinafter "Pennig"). According to the Examiner, Augagneur discloses a surgical tack for attaching material to tissue comprising a head having a drive thread and a barrel portion having a tissue engaging thread, wherein a portion of the drive thread and a portion of the tissue engaging thread define a gap therebetween and the distal end of the drive thread and the proximal end of the tissue engaging thread are in the same plane that extends through a longitudinal axis of the barrel portion. The Examiner relies on Pennig to disclose a drive thread configured to prevent threaded engagement of the head into tissue.

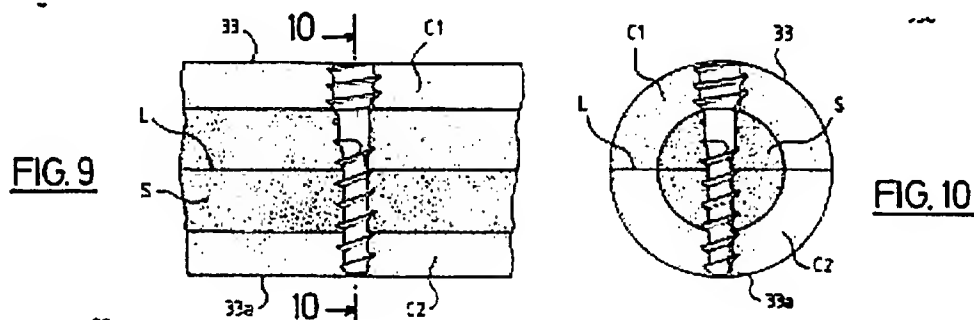
Claims 21, 35 and 40 recite a surgical tack for attaching a material to tissue including, *inter alia*, a head having a drive thread formed on an outer surface thereof, "wherein the drive thread is configured to prevent threaded engagement of the head into tissue," "wherein the first thread is configured to prevent threaded engagement of tissue," and "wherein the head is configured to prevent threaded engagement of tissue by the drive thread," respectively.

As shown in Figs. 1 and 3 of Augagneur, reproduced hereinbelow, Augagneur discloses a screw device for the coaptation of two small bone fragments having a long threaded distal part 1 and a short threaded proximal head part 2. Long threaded distal part 1 includes a first thread 10 and short threaded proximal head part 2 includes a second thread 20. Between distal part 1 and

proximal part 2, the bone screw is provided with a smooth section 3. The screw operates to compress two bone fragments through the action of the differing pitches of thread portions 1 and 2. During a complete revolution of the screw about its longitudinal axis, the travel of distal part 1 is higher than the travel of proximal part 2. Each lower end of distal part 1 and proximal part 2 include a lateral notch 13, 23, respectively. Notches 13, 23 are diametrically opposite each other and are intended to permit self-tapping into bone.

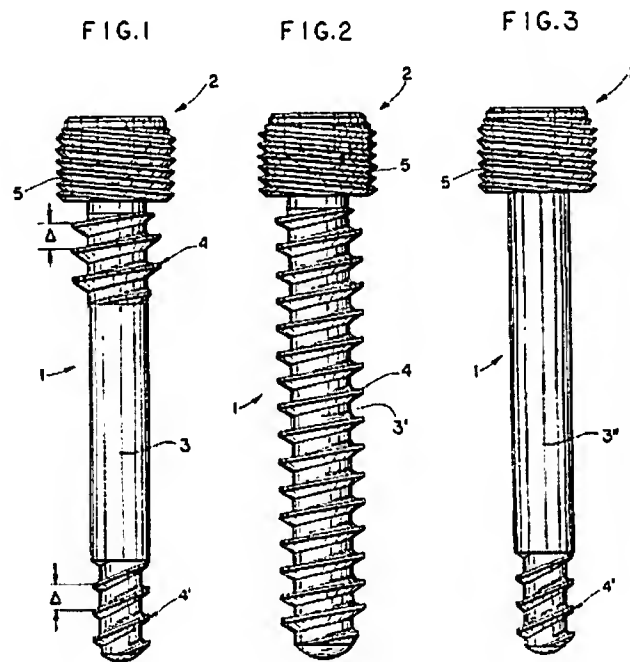


With reference to FIGS. 9 and 10 of Augagneur, because head 2 of the bone screw is entirely threaded, the bone screw is completely embedded within the bone, thereby preventing trauma to surrounding tissue.



With reference now to Figs. 1-3 of Pennig, reproduced herebelow, Pennig discloses a screw 1 having a head 2 and a shank 3. The outside of the screw head 2 is provided with a

screw-head thread 5, the thread-advance of which is directed opposite the direction of the thread-advance the screw-shank thread 4. This being the case, an internally threaded tool such as a nut may be threaded onto the head thread 5, to the point of engagement with a stop. Once the stop is engaged, continued nut rotation in the same direction is operative to retract screw 1 from the patient's bone. Thus, the screw of the Pennig can be removed from pinned locating engagement with an intermedullary nail and from threaded engagement to a bone, merely by driving the nut in the direction opposite the direction of initial shank-screw engagement to the bone.



Contrary to the Examiner's assertion, Augagneur does not disclose a surgical tack for attaching a material to tissue. Instead, as discussed in detail above, Augagneur discloses a bone screw configured to compress two bone fragments together through operation of differing thread pitches. In fact, Augagneur teaches away from the use of the bone screw for attaching any material to bone in that head 2 of the screw is entirely threaded and is received completely within bone.

As discussed above, Pennig discloses a screw including a screw-head thread that has a thread-advance which is opposite that of the thread-advance of the screw-shank thread. Rotation of a nut received on the screw-head thread beyond a stop cause the retraction of the screw from the bone. Although at least a portion of the screw-head thread must remain external of the bone being penetrated, Pennig fails to disclose that that the screw-head thread is configured to prevent engagement or reception of the screw-head within tissue. Furthermore, even if the screw-head thread were configured accordingly, which Applicants maintain it is not, it would not be obvious to combine the at least partially exposed head of the screw of Pennig with the bone screw of Augagneur because the bone screw is completely embedded within the bone, thereby preventing trauma to surrounding tissue. (see Col. 4, lines 15-17).

Additionally, as discussed above, the screw of Augagneur operates to compress two bone fragments through the action of the differing pitches of thread. Modifying the screw of Augagneur to include a head having a thread with an opposite direction would render the screw of Augagneur inoperable for its intended purpose. MPEP § 2143.01(VI) states that “[i]f the proposed modification of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claim *prima facie* “obvious.” Similarly, MPEP § 2143(V) states that “[i]f proposed modification would render the prior art being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.”

Therefore, Pennig does not provide any disclosure, that when taken in proper combination with Augagneur, discloses a surgical tack for attaching a material to tissue including, a head having a drive thread formed on an outer surface thereof, “wherein the first thread is configured to prevent reception of the head into tissue”, as recited in amended claims

21, 35 and 40.

Since claims 23, 24, 27, 32-34, 48 and 49 depend from amended claim 21, claim 36 depends from claim 35, and 41- 44 depend from amended claim 40, it is respectfully submitted that these claims are also in condition for allowance.

In the Office Action, claims 25 and 28 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Augagneur in view of Pennig and further in view of U.S. Patent No. 5,169,400 to Mühling et al. (hereinafter "Mühling"). The Office Action stated that Augagneur discloses a throughbore, but fails to disclose that the throughbore has a D-shaped cross-section. According to the Office Action, it would have been obvious to modify the throughbore of Augagneur to include a shape that better applies the torque of an insertion tool as disclosed in Mühling.

As discussed hereinabove, Augagneur in view of Pennig fail to disclose or suggest the surgical tack recited in amended claim 21. Adding the non-circular throughbore of Mühling fails to cure the deficiencies of Augagneur and Pennig. Mühling fails to disclose or suggest any features that, in combination with Augagneur and Pennig, would suggest the surgical tack recited in amended claim 21. Since claims 25 and 28 depend from independent claim 21, it is respectfully submitted that these claims are in condition for allowance.

Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. § 1.16 and/or 1.17 at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 21-0550. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 21-0550 therefor.

Prompt and favorable action on these claims, namely claims 21, 23-28, 32-36, 40-44, 48 and 49 is earnestly requested. Should the Examiner desire a further telephonic interview to


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resolve any outstanding matters, the Examiner is sincerely invited to contact the undersigned at
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Respectfully submitted,


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